

# **EXHIBIT D**

# **McGraw-Hill Dictionary of Scientific and Technical Terms**

## **Fifth Edition**

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On the cover: Photomicrograph of crystals of vitamin B<sub>1</sub>.  
(Dennis Kunkel, University of Hawaii)

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4 5 6 7 8 9 0 DOW/DOW 9 9 8

ISBN 0-07-042333-4

### Library of Congress Cataloging-in-Publication Data

McGraw-Hill dictionary of scientific and technical terms /  
Sybil P. Parker, editor in chief.—5th ed.

p. cm.

ISBN 0-07-042333-4

1. Science—Dictionaries. 2. Technology—Dictionaries.

I. Parker, Sybil P.

Q123.M34 1993

503—dc20

93-34772

CIP

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## magnet power

**magnet power** [ELECTROMAG] The electric power supplied to the coils of an electromagnet. { 'mag-nət, paù-ər }

**magnetron** [ELECTR] One of a family of crossed-field microwave tubes, wherein electrons, generated from a heated cathode, move under the combined force of a radial electric field and an axial magnetic field in such a way as to produce microwave radiation in the frequency range 1-40 gigahertz; a pulsed microwave radiation source for radar, and continuous source for microwave cooking. { 'mag-nə, trən }

**magnetron oscillator** [ELECTR] Oscillator circuit employing a magnetron tube. { 'mag-nə, trən 'ās-ə, lād-ər }

**magnetron pulling** [ELECTR] Frequency shift of a magnetron caused by factors which vary the standing waves or the standing-wave ratio on the radio-frequency lines. { 'mag-nə, trən 'pùl-ij }

**magnetron pushing** [ELECTR] Frequency shift of a magnetron caused by faulty operation of the modulator. { 'mag-nə, trən 'pùsh-ij }

**magnetron vacuum gage** [ELECTR] A vacuum gage that is essentially a magnetron operated beyond cutoff in the vacuum being measured. { 'mag-nə, trən 'vak-yəm, gāj }

**magnet wire** [ELEC] The insulated copper or aluminum wire used in the coils of all types of electromagnetic machines and devices. { 'mag-nət, wīr }

**magnification** [OPTICS] 1. A measure of the effectiveness of an optical system in enlarging or reducing an image; the magnification may be lateral, longitudinal, or angular. 2. See lateral magnification. { 'mag-nə-fə'kā-shən }

**magnifier** See simple microscope. { 'mag-nə, fr-ər }

**magnifying glass** [OPTICS] 1. Any device that uses a simple lens which enlarges the object being viewed. 2. See simple microscope. { 'mag-nə, fr-ij, glas }

**magnifying power** [OPTICS] The ratio of the tangent of the angle subtended at the eye by an image formed by an optical system, to the tangent of the angle subtended at the eye by the corresponding object at a distance for convenient viewing. { 'mag-nə, fr-ij, paù-ər }

**magnetistor** [ELECTR] A device that utilizes the effects of magnetic fields on injection plasmas in semiconductors such as indium antimonide. { 'mag-nis-tər }

**magnitude** [ASTRON] The relative luminance of a celestial body; the smaller (algebraically) the number indicating magnitude, the more luminous the body. Also known as stellar magnitude. [GEOPHYS] A measure of the amount of energy released by an earthquake. [MATH] See absolute value. { 'mag-ni-tüd }

**magnitude method** [ORD] Method of adjusting gunfire for range when the amount and direction of the deviation are known. { 'mag-nə, tüd, meth-əd }

**magnitude ratio** [ASTRON] The ratio (2.512) of relative brightness of two celestial bodies differing in magnitude by 1.0. { 'mag-nə, tüd, 'rā-shō }

**magnitude system** [ASTRON] A system for designating the relative brightness of stars when photography is used; emulsions of different color sensitivities, used with color filters, permit measurements of starlight of different wavelengths with corresponding determination of magnitude at these wavelengths. { 'mag-nə, tüd, sist-əm }

**magneto** [MET] An alloy of 95.5% nickel and 4.5% manganese, used in the manufacture of incandescent lamps and radio tubes. { 'mag-nə }

**magnocellular** [CYTOL] Having large cell bodies; said of various nuclei of the central nervous system. { 'mag-nə-sel-yə-ə }

**magnochromite** See magnesiochromite. { 'mag-nə'krō, mīt }

**magnetoferrite** See magnesioferrite. { 'mag-nə'fē, rīt }

**Magnolia** [BOT] A genus of trees, the type genus of the Magnoliaceae, with large, chiefly white, yellow, or pinkish flowers, and simple, entire, usually large evergreen or deciduous alternate leaves. { 'mag-nōl-yə }

**Magnoliaceae** [BOT] A family of dicotyledonous plants of the order Magnoliales characterized by hypogynous flowers with few to numerous stamens; stipulate leaves, and uniaperturate pollen. { 'mag-nō-lē'ās-ē, ē }

**Magnoliales** [BOT] The type order of the subclass Magnoliidae; members are woody plants distinguished by the presence of spherical ethereal oil cells and by a well-developed perianth of separate tepals. { 'mag-nō-lē'ā-lēz }

**Magnoliatae** See Magnoliopsida. { 'mag-nō'lr-ā, ē }

**Magnoliidae** [BOT] A primitive subclass of flowering plants in the class Magnoliopsida generally having a well-developed perianth, numerous centripetal stamens, and bitegmic, crassinucellate ovules. { 'mag-nō'lr-ā, ē }

**Magnoliophyta** [BOT] The angiosperms, a division of vascular seed plants having the ovules enclosed in an ovary and well-developed vessels in the xylem. { 'mag-nō-lē'āf-əd-ə }

**Magnoliopsida** [BOT] The dicotyledons, a class of flowering plants in the division Magnoliophyta generally characterized by having two cotyledons and net-veined leaves, with vascular bundles borne in a ring enclosing a pith. { 'mag-nō-lē'āp-sə-də }

**magnon** [SOLID STATE] A quasi-particle which is introduced to describe small departures from complete ordering of electronic spins in ferro-, ferri-, antiferro-, and helimagnetic arrays. Also known as quantized spin wave. { 'mag-nən }

**magnophorite** [MINERAL] NaKCaMg<sub>5</sub>Si<sub>8</sub>O<sub>23</sub>OH A monoclinic mineral composed of a basic silicate of sodium, potassium, calcium, and magnesium; member of the amphibole group. { 'mag-nə'fōr, it }

**magnum** [ANAT] Large, as in foramen magnum. { 'mag-nəm }

**Magnus effect** [FL MECH] A force on a rotating cylinder in a fluid flowing perpendicular to the axis of the cylinder; the force is perpendicular to both flow direction and cylinder axis. Also known as Magnus force. { 'māg-nəs i, fekt }

**Magnus force** See Magnus effect. { 'māg-nəs, fōrs }

**Magnus moment** [FL MECH] A torque associated with the Magnus effect, such as moments about the pitch and yaw axes of a missile or aircraft due to rotation about the roll axis. { 'māg-nəs, mō-mənt }

**mag-slip** See synchro. { 'mag, slip }

**maguery** [MATER] A fiber obtained from the agave (*Agave cantala*); maguery fibers are white, stiff, brilliant, and light in weight, and are used chiefly for binder twine. { 'mā-gā }

**mahlstick** [GRAPHICS] A stick held in the palette hand of a painter and used as a support for his painting hand; it is a light rod of wood often with a leather-covered ball at one end. Also known as maulstick; rest stick. { 'mōl, stik }

**mahogany** [BOT] Any of several tropical trees in the family Meliaceae of the Geraniales. [MATER] The hard wood of these trees, especially the red or yellow-brown wood of the West Indies mahogany tree (*Swietenia mahagoni*). { 'mā'hāg-ə-nē }

**mahogany acid** [MATER] A dark-colored mixture of sulfonic acid derived from petroleum; the salts are used as emulsifying agents and in lubricants. { 'mā'hāg-ə-nē 'ās-əd }

**mahogany soap** [MATER] The sodium salt of crude or refined petroleum sulfonic acids, used as flotation agents and to increase the oil absorption of mineral pigments in paint. { 'mā'hāg-ə-nē 'sōp }

**mahubarana fat** [MATER] A pale-yellow solid oil, melting point 40-44°C, obtained from seeds of trees of the genus *Bol-doa*; used for soaps and candles. { 'mā'hə-bā'rā-nə, fat }

**maidenhead** See hymen. { 'mād-ən, hed }

**maieusitophobia** [PSYCH] An abnormal fear of childbirth. { 'mā-yū-sē-ə'fō-bē-ə }

**mail box** [COMPUT SCI] 1. A portion of a computer's main storage that can be used to hold information about other devices. 2. Computer storage facilities designed to hold electronic mail. { 'māl, bāks }

**Maillard reaction** [BIOCHEM] A reaction in which the amino group in an amino acid tends to form condensation products with aldehydes; believed to cause the Browning reaction when an amino acid and a sugar coexist, evolving a characteristic flavor useful in food preparations. { 'mī'yār ē, ak-shən }

**mail merge** [COMPUT SCI] The process of combining a form letter with a list of names and addresses to produce individualized letters. { 'māl, mārj }

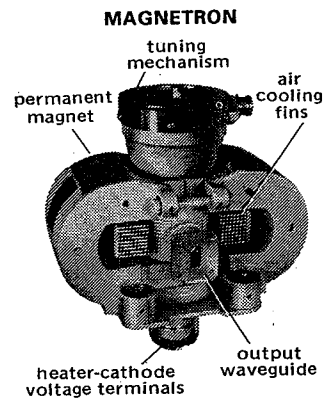
**main** [ELEC] 1. One of the conductors extending from the service switch, generator bus, or converter bus to the main distribution center in interior wiring. 2. See power transmission line. [ENG] A duct or pipe that supplies or drains ancillary branches. { 'mān }

**main-and-tail haulage** [MIN ENG] A single-track haulage system that is operated by a haulage engine with two drums, each with a separate rope. { 'mān ən 'tāl 'hōl-ij }

**main-and-transfer bus** [ELEC] A substation switching arrangement similar to a single bus but with an additional transfer bus provided. { 'mān ən 'tranz-fər, bās }

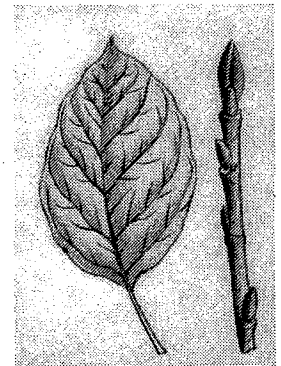
## main-and-transfer bus

1201



Coaxial cavity magnetron with horseshoe-shaped magnets. (From J. W. Gewartowski and H. A. Watson, *Principles of Electron Tubes*, Van Nostrand, 1965)

## MAGNOLIA



Leaf and twig of the cucumber tree, *Magnolia acuminata*.

## MAGNOLIACEAE



Flower of the tulip tree (*Liriodendron tulipifera*). (Photograph by F. W. Westlake, from National Audubon Society)